

朝陽科技大學 098學年度第1學期教學大綱
Physics 電子物理

當期課號	3735	Course Number	3735
授課教師	李建緯	Instructor	LI,JIAN WEI
中文課名	電子物理	Course Name	Physics
開課單位	資訊工程系(四進)一A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	本課程主要介紹物理學當中關於電子電路的基本概念，學生在完成本課程後，將可了解關於電與磁的基本原理，其主要涵蓋的範圍有：電荷 - 電場 - 高斯定律 - 電位 - 電容 - 電流與電阻 - 電路 - 磁場 - 馬克斯威爾方程式	Objectives	The goal of this course is to provide the students with a basic knowledge of physics. The students will realize the following important electromagnetism theories in this course: Electrostatics: Forces - Electric Fields - Electrostatics: Energy - Capacitance - Direct Current: Ohm's Law, Resistance, Electric Current, Voltage, Power - Circuits - Magnetism: Magnetic field, - Currents and Ampere's law - Magnetic force - Faraday's law, Maxwell equation.
教材	1. 教科書 "Serway's essentials of college physics 7/e" 物理學(第七版) 滄海書局 2. 使用黑板和簡報教授課程 3. 指定作業練習和平實考 4. 實施中中和期末考	Teaching Materials	1. Text book. "Serway's essentials of college physics 7/e" 2. speak teaching by board and PPT 3. Home work and test 4. Midterm and final exam.
成績評量方式	1. 期中和期末各30% 2. 小考和作業外加出席率40%	Grading	1. Midterm/ final exam: 30% 2. Home work, test, and learning attitude 40%
教師網頁	-		
教學內容	1. 培養學生基礎數理思考能力. 2. 上半學期以電學為主: 電荷,庫倫定律,電場,連續電荷電場,高斯定理,電容和電位能,電場和電位能,歐姆定律,直流分析 3. 下半學期以電磁學為主: 磁力與磁場觀念,安培定律,法拉第定律,冷次定律,自感與互感,濾波電路和交流電路	Syllabus	1. The aim to study students' thinking ability to physics. First part: charge, charge force, electrical field, Gauss thm., potential and energy, ohm's law, and DC circuit analysis. 2. Second part: magnetic force and field, Ampere's thm., Faraday thm., inductance and mutual inductor, filter and AC circuit analysis

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